

Amendments to the Claims

Please amend the claims as indicated in the claim listing below. This listing will replace all prior versions of the claims in the application:

1. (Currently amended) A hydrocyclone, ~~comprising:~~ comprising a body having an inlet a back wall at the periphery one end of the body, ~~an adjacent back wall~~ through which back wall there is a central overflow connection outlet, an inlet for intake of a stream of fluid, the inlet located at the periphery of the body proximate to the back wall, and a central underflow connection outlet at the opposite end of the body[;], where:

the overflow back wall ~~presenting an inclined face~~ presents an interior face with at least two ramps sloped relative to the back wall for redirecting the stream of fluid entering the hydrocyclone to flow axially along the hydrocyclone in at least two different paths having at least two axial velocity components for improved phase separation performance.

2. (Currently amended) The hydrocyclone of claim 1, further comprising:

said body having a longitudinal axis extending from said overflow connection outlet to said underflow connection outlet;

said face comprises at least two ramps comprise a radially inner portion ramp and a radially outer portion ramp, each defining a generally helical surface at a distinct slope extending from adjacent said inlet toward said underflow connection outlet.

3. (Currently amended) The hydrocyclone of claim 2, wherein:

said inner radial portion ramp extends at a shallower slope toward said underflow connection outlet than said outer radial portion ramp.

4. (Currently amended) The hydrocyclone of claim 3, wherein:

the slope of said outer radial portion ramp extends at more than twice the slope of that of said inner radial portion ramp.

5. (Currently amended) The hydrocyclone of claim 2, further comprising:

a wall disposed generally equidistant from said longitudinal axis and marking a boundary between said inner and outer portions radial ramps of said face.

6. (Canceled)

7. (Currently amended) The hydrocyclone of claim 6 1, wherein:

the slope of each radial portion ramp is greater than that of the portion ramp spaced radially inwardly thereof.

8. (Currently amended) The hydrocyclone of claim 1, wherein:

the end back wall face presents a generally smooth, continuous surface.

9. (Currently amended) The hydrocyclone of claim 1, wherein:

at least a portion of the end back wall face is inclined relative to the a longitudinal axis of the hydrocyclone extending from the overflow outlet to the underflow outlet.

10. (Currently amended) The hydrocyclone of claim 2, wherein:

said helical surfaces are of the ramps have a flat cross-section.

11. (Currently amended) The hydrocyclone of claim 2, wherein:

said helical surfaces are curved of the ramps have a curved cross-section.